

WHAT IS CLAIMED IS:

1. A signal management (SM) electronics housing, which comprises:

a front wall;

a rear wall opposite the front wall;

a top wall;

5 a bottom wall opposite the top wall;

a first side wall; and

a second side wall opposite the first side wall, the front wall, rear wall, top wall, bottom wall, first side wall and second side wall of the housing forming an enclosure for electronic circuitry contained therein, the electronics housing being mountable on a supporting member, each of the first and second side walls having lateral wall sections which extend beyond the rear wall of the housing to define a flat planar surface for lying flush against the supporting member when the electronics housing is mounted thereon, the rear wall of the housing and extending lateral wall sections of the first and second side walls defining therebetween and with the supporting member, when the electronics housing is mounted thereon, a channel for routing electrical wires therein and for securing the electrical wires in place.

2. A signal management (SM) electronics housing, which comprises:

a housing structure which defines an enclosure for containing therein electronic circuitry, the housing structure being mountable on a supporting structure, the housing structure having at least two opposite walls, each of the at least two opposite walls having formed therein at least one open slot; and

a plurality of connectors, each connector of the plurality of connectors being receivable in a corresponding one of the open slots, the connectors being attachable to the supporting structure to selectively secure the electronics housing thereto.

3. A signal management (SM) electronics housing as defined by Claim 2, wherein at least one of the connectors of the plurality of connectors is a locking connector, the locking connector being selectively configurable in a first configuration, wherein the locking connector allows the electronics housing to be selectively mounted to and unmounted
5 from the supporting structure, and a second configuration, wherein the locking connector secures the electronics housing to the supporting structure.

4. A signal management (SM) electronics housing as defined by Claim 3, wherein the locking connector includes a main connector body, and a pin extending from and rotatably mounted on the main connector body, the pin including a camming surface, the pin being received in an opening formed in the supporting structure when the electronics housing
5 is mounted thereon, the pin being selectively rotatable such that the camming surface thereof engages an edge of the supporting structure defining the opening to secure the electronics housing to the supporting structure.

5. A signal management (SM) electronics housing as defined by Claim 4, wherein the main connector body of the locking connector includes a pair of lateral side walls, each of the side walls of the pair of lateral side walls having a slot formed therein, the slot of each of the side walls of the main connector body receiving a portion of the wall of the
5 at least two opposite walls when the locking connector is received by a respective open slot formed in the wall of the at least two opposite walls of the housing structure, the main connector body further having a bore formed through the thickness thereof, the bore receiving the rotatable pin.

6. A signal management (SM) electronics housing as defined by Claim 5, wherein one of the rotatable pin and the main connector body of the locking connector includes a ridge, and the other of the rotatable pin and the main connector body of the locking connector has formed in a surface thereof a groove; and wherein the ridge is slidably seated
5 in the groove so that the rotatable pin is mounted captively to the main connector body of the locking connector but rotatable with respect thereto.

7. A signal management (SM) electronics housing as defined by Claim 5, wherein the main connector body includes a ridge formed on an interior surface defining the bore thereof and extends radially inwardly in the bore and partially circumferentially about the interior bore surface, the ridge being broken in at least two diametrically opposed locations, the ridge having camphered edges at the at least two diametrically opposed locations; and wherein the rotatable pin having formed circumferentially on a surface thereof a groove from which extends at least a pair of diametrically opposed, radially protruding tabs, the ridge of the main connector body being slidably received by the groove of the rotatable pin of the locking connector to captively mount the rotatable pin to the main connector body of the locking connector, the at least two diametrically opposed tabs riding up over the camphered edges of the ridge when the rotatable pin is rotated relative to the main connector body to provide additional resistance between the pin and the main connector body and to prevent the pin from rotating inadvertently within the main connector body.

8. A signal management (SM) electronics housing as defined by Claim 2, wherein at least one of the connectors of the plurality of connectors is a locking connector, and wherein at least another of the connectors of the plurality of connectors is a passive connector, the locking connector being received in a respective open slot formed in one wall of the at least two opposite walls, and the passive connector being received in a respective open slot formed in another wall of the at least two opposite walls, the locking connector including a main connector body and a pin extending from and rotatably mounted on the main connector body, the pin including a camming surface, the pin being received in a first opening formed in the supporting structure when the electronics housing is mounted thereon, the passive connector including a main connector body and at least one pin extending from and non-rotatably mounted on the main connector body thereof, the at least one non-rotatable pin including a camming surface, the at least one non-rotatable pin of the passive connector being received in a second opening formed in the supporting structure when the electronics housing is mounted thereon, the pin of the locking connector being selectively rotatable such that the camming surface thereof engages an edge of the supporting structure defining the first opening and causing the camming surface of the at least one non-rotatable pin of the passive connector to engage an edge of the supporting structure defining the second opening to secure the electronics housing to the supporting structure.

9. A signal management (SM) electronics housing as defined by Claim 2,
wherein at least one of the connectors of the plurality of connectors is a passive connector,
the passive connector including a main connector body and at least two flanges extending
outwardly in opposite directions from the main connector body, and a pair of spaced apart
5 pins, one pin of the pair of pins being mounted on and extending from one flange of the at
least two flanges, and the other pin of the pair of pins being mounted on and extending from
the other flange of the at least two flanges, each pin of the pair of pins having a slot formed
over a portion of the circumference thereof, each slot defining a camming surface, the passive
connector being selectively received in one of the open slots of the housing structure, each
10 pin of the pair of pins being received in a respective opening formed in the supporting
structure when the electronics housing is mounted thereon, the camming surface of each pin
engaging an edge of the supporting structure defining the respective opening in which the pin
is received to secure the electronics housing to the supporting structure.

10. A signal management (SM) electronics housing as defined by Claim 9,
wherein the main connector body of the passive connector is generally T-shaped and includes
an outward portion which overhangs each flange to define a slot therebetween, each slot
receiving a portion of one wall of the at least two opposite walls when the passive connector
5 is received by the open slot of the one wall of the at least two opposite walls.

11. A signal management (SM) electronics housing as defined by Claim 2,
wherein at least one of the connectors of the plurality of connectors is a passive connector,
the passive connector having a main connector body, at least two flanges extending in
opposite directions from the main connector body, and a pin centrally located on the main
5 connector body and extending therefrom, the passive connector being selectively received in
one of the open slots of the housing structure, the pin being received in an opening formed in
the supporting structure when the electronics housing is mounted thereon, each flange of the
at least two flanges resting on a surface of the supporting structure when the electronics
housing is mounted thereon and providing stability to the electronics housing when the
10 electronics housing is mounted on the supporting structure.

12. A signal management (SM) electronics housing as defined by Claim 2,
wherein at least one connector of the plurality of connectors is a passive connector, and
wherein at least another connector of the plurality of connectors is an active locking
connector, the passive connector having a main connector body and at least one non-rotatable
5 pin mounted on and extending from the main connector body, the active locking connector
having a main connector body and a rotatable pin rotatably mounted on and extending from
the main connector body of the active locking connector; and wherein the at least one open
slot formed in each wall of the at least two opposite walls may selectively receive one of the
passive connector, the active locking connector and a fastener.

13. A signal management (SM) electronics housing as defined by Claim 12,
wherein the fastener is a screw for mounting the electronics housing to a mounting support,
the mounting support being different from the supporting structure.

14. A signal management (SM) electronics housing, which comprises:

a front wall;

a rear wall opposite the front wall;

a top wall;

5 a bottom wall opposite the top wall;

a first side wall; and

a second side wall opposite the first side wall, the front wall, rear wall, top wall,
bottom wall, first side wall and second side wall of the housing forming an enclosure for
electronic circuitry contained therein, the electronics housing being mountable on a supporting
10 member, wherein the front wall of the electronics housing includes a first front surface
portion and a second front surface portion residing at an angle to the first front surface
portion; and wherein the electronics housing further includes at least one coaxial connector
mounted on the angled second front surface portion.

15. A signal management (SM) electronics housing as defined by Claim 14, wherein the second front surface portion is angled with respect to the first front surface portion at about a 45 degree angle.

16. A signal management (SM) electronics housing as defined by Claim 14, wherein the electronics housing further includes at least one arm extending outwardly from the front wall thereof to define with the front wall at least one channel through which electrical wires may be routed.

17. A signal management (SM) system, which comprises:

an enclosure for receiving a plurality of electronics housings, the enclosure having at least one planar panel, the planar panel having a plurality of spaced-apart openings formed through the thickness thereof; and

5 at least one electronics housing for mounting in the enclosure on the planar panel thereof, the at least one electronics housing including a housing structure defining an interior space for containing therein electronic circuitry, the housing structure being mountable on the planar panel of the enclosure, the housing structure having at least two opposite walls, each of the at least two opposite walls having formed therein at least one open slot; and a plurality
10 of connectors, each connector of the plurality of connectors being interchangeably receivable in a corresponding one of the open slots, each of the connectors having a main connector body and a pin mounted on and extending therefrom, the pins being received in corresponding openings of the plurality of spaced-apart openings formed in the planar panel of the enclosure to selectively secure the at least one electronics housing to the planar panel.